CLAIMS

1. A gene delivery vehicle having been provided with at least a tissue tropism for smooth muscle cells and/or endothelial cells.

2. A gene delivery vehicle having been deprived of at least a tissue tropism for liver cells.

3. A vehicle according to claim 1 wherein said vehicle has been deprived of at least a tissue tropism for liver cells.

4. A vehicle according to anyone of the claims 1-3, wherein said tissue tropism is being provided by a virus capsid.

5. A vehicle according to claim 4, wherein said capsid comprises protein fragments from at least two different viruses.

6. A vehicle according to claim 5, wherein at least one of said viruses is an adenovirus.

7. A vehicle according to claim 5 or claim 6, wherein at least one of said viruses is an adenovirus of subgroup B.

8. A vehicle according to anyone of the claims 5-7, wherein at least one of said protein fragments comprises a tissue tropism determining fragment of a fiber protein derived from a subgroup B adenovirus.

9. A vehicle according to anyone of the claim 7 or claim 8, wherein said subgroup B adenovirus is adenovirus 16.

10. A vehicle according to claim 7-9, wherein protein fragments not derived from an adenovirus of subgroup B are derived from an adenovirus of subgroup C, preferably of adenovirus 5.

11. A vehicle according to anyone of the claims 1-10 comprising a nucleic acid derived from an adenovirus.

12. A vehicle according to anyone of the claims 1-11, comprising a nucleic acid derived from at least two different adenoviruses.

13. A vehicle according to claim 11 or claim 12, wherein said nucleic acid comprises at least one sequence encoding a fiber protein comprising at least a tissue tropism determining fragment of a subgroup B adenovirus fiber protein, preferably of adenovirus 16.

14. A vehicle according anyone of the claims 10-13, wherein said adenovirus nucleic acid is modified such that the capacity of said adenovirus nucleic acid to replicate in a target cell has been reduced or disabled.

15. A vehicle according to anyone of the claims 11-14, wherein said adenovirus nucleic acid is modified such that the capacity of a host immune system to mount an immune response against adenovirus proteins encoded by said adenovirus nucleic acid has been reduced or disabled.

16. A vehicle according to anyone of the claims 1-15, comprising a minimal adenovirus vector or an Ad/AAV chimaeric vector.

17. A vehicle according to anyone of the claims 1-16, further comprising at least one non-adenovirus nucleic acid.

18. A vehicle according to claim 17 wherein at least one of said non-adenovirus nucleic acids is a gene selected from the group of genes encoding: an apolipoprotein, a nitric oxide synthase, a herpes simplex virus thymidine kinase, an interleukin-3, an interleukin-1α, an (anti)angiogenesis protein such as angiostatin, an anti-proliferation protein, a smooth muscle cell anti-migration protein, a vascular endothelial growth factor (VGEF), a basic fibroblast growth factor, a hypoxia inducible factor 1α (HIF-1α) or a PAI-1.

19. A cell for the production of a vector according to anyone of the claims 1-18, comprising means for the assembly of said vectors wherein said means includes a means for the production of an adenovirus fiber protein, wherein said fiber protein comprises at least a tissue tropism determining fragment of a subgroup B adenovirus fiber protein.

20. A cell according to claim 19, wherein said cell is or is derived from a PER.C6 cell (ECACC deposit number 96022940).

21. The use of a vehicle [illegible] claims 1-18 as a pharmaceutical.

22. The use of claim 21 for the treatment of cardiovascular disease.

23. The use of claim 21 for the treatment of a disease, treatable by transfer of a therapeutic nucleic acid to smooth muscle cells and/or endothelial cells.

24. An adenovirus capsid with or provided with a tissue tropism for smooth muscle cells and/or endothelial cells wherein said capsid preferably comprises proteins from at least two different adenoviruses and wherein at least a tissue tropism determining fragment of a fiber protein is derived from a subgroup B adenovirus, preferably of adenovirus 16.

25. An adenovirus capsid having been deprived of a tissue tropism for liver cells wherein said capsid preferably comprises proteins from at least two different adenoviruses and wherein at least a tissue tropism determining fragment of a fiber protein is derived from a subgroup B adenovirus, preferably of adenovirus 16.

26. The use of an adenovirus capsid according to claim 24 and/or claim 25, for the delivery of nucleic acid to smooth muscle cells and/or endothelial cells.

27. The use of an adenovirus capsid according to claim 26, in a medicament for the treatment of a disease.

28. Construct pBr/Ad.BamRΔFib, comprising adenovirus 5 sequences 21562-31094 and 32794-35938.

29. Construct pBr/AdBamRfib16, comprising adenovirus 5 sequences 21562-31094 and 32794-35938, further comprising an adenovirus 16 gene encoding fiber protein.

30. Construct pBr/AdBamR.pac-fib16, comprising adenovirus 5 sequences 21562-31094 and 32794-35938, further comprising an adenovirus 16 gene encoding fiber protein, and further comprising a unique PacI-site in the proximity of the adenovirus 5 right terminal repeat, in the non-adenovirus sequence backbone of said construct.

31. Construct pWE/Ad.AflIIrITRfib16, comprising adenovirus 5 sequences 3534-31094 and 32794-35938, further comprising an adenovirus 16 gene encoding fiber protein.

32. Construct pWE/Ad.AflIIrITRDE2Afib16, comprising adenovirus 5 sequences 3534-22443, 24033-31094 and 32794-35938, further comprising an adenovirus 16 gene encoding fiber protein.

33. The use of a construct according to anyone of the claims 28-32 for the generation of a vehicle according to anyone of the claims 1-18 or an adenovirus capsid according to claim 24 or claim 25.

34. The production of a vehicle according to anyone of the claims 1-18 or a adenovirus capsid according to claim 24 or claim 25.

35. The use of a vehicle according to anyone of the claims 1-18 for the generation a gene library.

36. The use of a fiber protein of adenovirus 16 for the delivery of nucleic acid to smooth muscle cells and/or endothelial cells.

37. . The use of a fiber protein of adenovirus 16 in an adenovirus capsid for depriving said capsid of a tissue tropism for liver cells.